CLAIMS

1. In a wireless network, a method for estimating signal strength in a time slot, comprising:
   a. measuring a first received signal strength in each of a plurality of segments within the time slot for a first frame;
   b. measuring a second received signal strength in each of a plurality of segments within a corresponding time slot for a second frame, wherein each of the plurality of segments within the time slot for the first frame corresponds one-to-one with each of the plurality of segments for the corresponding time slot for the second frame;
   c. calculating an average received signal strength for each segment of the time slot by averaging each of the measured first received signals of the first frame with the corresponding measured second received signals of the second frame; and
   d. estimating the signal strength by selecting the maximum of the average received signal strengths based on the calculating step.

2. The method of claim 1, further comprising:
   e. defining an accumulation interval comprising a plurality of frames;
   f. repeating step b. for the remainder of the plurality of frames in the accumulation interval;
   g. performing step c. by averaging the measured received signal strengths across the plurality of frames in the accumulation interval.

3. The method of claim 1, wherein each of the segments within a time slot is equal.

4. The method of claim 1, wherein a time slot is divided into distinct segments.

5. The method of claim 1, wherein a time slot is divided into overlapping segments.

6. The method of claim 1, wherein the time slot is idle and the estimated signal strength is representative of interference in that time slot.

7. The method of claim 6, further comprising:

e. defining an accumulation interval comprising a plurality of frames;

f. repeating step b. for the remainder of the plurality of frames in the accumulation interval;

g. performing the calculating step by averaging the measured received signal strengths across the plurality of frames in the accumulation interval.

8. The method of claim 2, wherein defining an accumulation interval comprises defining an accumulation interval the duration of which is time based.

9. The method of claim 2, wherein defining an accumulation interval comprises defining an accumulation interval the duration of which is based on a number of frames.

10. The method of claim 1, further comprising dividing the time slot into a plurality of segments prior to the first measuring step.

11. The method of claim 10, wherein dividing the time slot into a plurality of segments comprises dividing the time slot into a plurality of equally-sized segments.

12. The method of claim 2, wherein the accumulation interval remains constant and each subsequent frame replaces the oldest frame in the measuring step and the calculating step.

13. The method of claim 2, further comprising comparing the estimated signal strength to a predefined threshold value, and establishing a wireless connection on the time slot if the estimated signal strength does not exceed the threshold value.

14. The method of claim 1, wherein step c. further comprises applying a weighting factor to each of the plurality of segments.

15. In a wireless network, a method for estimating signal strength in a time slot, comprising:

a. defining an accumulation interval comprising a plurality of frames;

b. measuring a first received signal strength in each of a plurality of segments within the time slot for a first frame;

c. measuring a received signal strength for the remainder of the plurality of frames in the accumulation interval by measuring the received signal strength in each of a plurality of segments within a corresponding time slot for each subsequent frame, wherein each of the plurality of segments within the time slot for the first frame corresponds one-to-one with each of the plurality of segments for the corresponding time slot for each subsequent frame;

d. calculating an average received signal strength for each segment of the time slot by averaging each of the measured first received signals of the first frame with the corresponding measured received signals of each subsequent frame in the accumulation interval;

e. estimating the signal strength by selecting the maximum of the average received signal strengths based on the calculating step;

f. measuring the received signal strength in each of a plurality of segments within the time slot for a next frame;

g. recalculating the average received signal strength for each segment of the time slot by averaging each of the measurements collected in step d. with the measurements taken in step f.; and

h. repeating step e.

16. A system for estimating interference in a time slot, comprising:

means for detecting a received signal in each of a plurality of segments within the time slot for each frame in a predefined accumulation interval, wherein each of the plurality of segments within the time slot for the first frame in the accumulation interval corresponds one-to-one with each of the plurality of segments for the corresponding time slot for each subsequent frame;

means for measuring the strength of the received signals;

means for storing the received signal strength measurements; and

processing means for:

calculating an average received signal strength for each segment of the time slot by averaging each of the measured received signals of a first frame in the accumulation interval with the corresponding measured received signals of each subsequent frame; and

estimating the interference attributable to the received signals by selecting the maximum of the average received signal strengths based on the calculating step.

17. The system of claim 16, wherein the detecting means and the measuring means are integral to a signal strength receiver.

18. The system of claim 16, wherein the storing means comprises a base station transceiver memory.

19. The system of claim 16, wherein the storing means comprises a base transceiver station (BTS) memory.

20. The system of claim 16, wherein the storing means comprises a base station controller memory.

21. The system of claim 16, wherein the storing means comprises a mobile switching center memory.

22. The system of claim 17, wherein the processing means is integral to the signal strength receiver.

23. The system of claim 16, wherein the processing means is integral to a base station transceiver.

24. The system of claim 16, wherein the processing means is integral to a base trasnsceiver station (BTS).

25. The system of claim 16, wherein the processing means is integral to a base station controller.

26. The system of claim 16, wherein the processing means is integral to a mobile switching center.